Rooke, A.
10/762588

FILE 'REGISTRY' ENTERED AT 12:16:41 ON 13 FEB 2006

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 FEB 2006 HIGHEST RN 874108-28-8
DICTIONARY FILE UPDATES: 12 FEB 2006 HIGHEST RN 874108-28-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

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* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

L1 10 S HLIHNVHKEEHAHAHN/SQSP

L1 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 484824-25-1 REGISTRY
CN GenBank CAA37824 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank CAA37824 (Translated from: GenBank X53828)
CI MAN
SQL 332

SEQ 1 MSLKDHLIHN VHKEEHAHAH NKISVVGVGA VGMACAISIL MKDLADELTL
51 VDVVEDKLKG EMLDLQHGSL FLKTPKIISG KDYSVTAHSK LVIVTAGARQ
101 QEGESRLNLV QRNVNIFKFI IPNVVKYSPD CKLLIVSNPV DILTYVAWKI
151 SGFPKHRVIG SGCNLDSARF RHLMGERLGI HPLSCHGWIV GEHGDSSVPV
201 WSGVNVAGVS LKALHPDMGT DADKEHWKEV HKQVVDSAYE VIKLKGYTSW
251 AIGLSVADLA ETIMKNLRRV HPISTAVKGM HGIKDDVFLS VPCVLGSSGI
301 TDVVKMILKP DEEEKIKKSA DTLWGIQKEL QF
HITS AT: 6-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 484053-89-6 REGISTRY
CN L-Lysine, L-methionyl-L-lysyl-L-α-aspartyl-L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L-α-glutamyl-L-α-glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl-L-asparaginyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 11: PN: JP2005095079 SEQID: 11 unclaimed sequence
CN 1: PN: JP2003009877 SEQID: 1 claimed protein
CN 1: PN: JP2003009880 SEQID: 1 claimed protein
CN 27: PN: JP2005095083 SEQID: 27 unclaimed sequence
CN Peptide (chicken muscle lactate dehydrogenase N-terminal fragment)
SQL 20

SEQ 1 MKDHLIHNVH KEEHAHAHNK
=======
HITS AT: 4-19

REFERENCE 1: 142:387959

REFERENCE 2: 142:387958

REFERENCE 3: 138:84441

REFERENCE 4: 138:84439

L1 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 475131-37-4 REGISTRY
CN 8: PN: US20020164718 FIGURE: 2 unclaimed sequence (9CI) (CA INDEX NAME)
CI MAN
SQL 280

SEQ 1 MTMITPSLKD HLIHNVHKEE HAHAHNKIDI VGGSDSREGA WPWVVALYFD
==========
51 DQQVCGASLV SRDWLVSAAH CVYGRNMEPS KWKAVLGLHM ASNLTSPQIE
101 TRLIDQIVIN PHYNKRRKNN DIAMMHLEMK VNYTDYIQPI CLPEENQVFP
151 PGRICSIAGW GALIYQGSTA DVLQEADVPL LSNEKCQQQM PEYNITENMV
201 CAGYEAGGVD SCQGDSGGPL MCQENNRWLL AGVTSFGYQC ALPNRPGVYA
251 RVPRFTEWIQ SFLHELVISX EFTGRRFTTS
HITS AT: 11-26

REFERENCE 1: 137:365958

L1 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 474426-21-6 REGISTRY
CN L-Asparagine, L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L-α-glutamyl-L-α-glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1: PN: US20020164718 PAGE: 13 claimed protein
CN 1: PN: US20040180415 SEQID: 1 unclaimed sequence
CN 1: PN: WO03000708 PAGE: 15 unclaimed sequence
SQL 16

SEQ 1 HLIHNVHKEE HAHAHN
==========
HITS AT: 1-16

REFERENCE 1: 141:273989

REFERENCE 2: 138:69467

REFERENCE 3: 137:365958

L1 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 259678-66-5 REGISTRY
CN L-Lysine, L-lysyl-L-α-aspartyl-L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L-α-glutamyl-L-α-glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl-L-asparaginyl- (9CI) (CA INDEX NAME)
SQL 19

SEQ 1 KDHLIHNVHK EEHAHAHNK
========= =========
HITS AT: 3-18

REFERENCE 1: 141:345966

REFERENCE 2: 132:177550

L1 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 250676-82-5 REGISTRY
CN 2: PN: WO9957992 SEQID: 2 unclaimed protein (9CI) (CA INDEX NAME)
CI MAN
SQL 278

SEQ 1 MTMITPSLSL KDHLIHNVHK EEHAHAHNKI SVVGVGAVGP VSKGEELFTG
========= =========
51 VVPILVELDG DVNGHKFSVS GEGEGDATYG KLTLKFICTT GKLPVPWPTL
101 VTTFSYGVQC FSRYPDHMKR HDFFKSAMPE GYVQERTISF KDDGNYKTRA
151 EVKFEGDTLV NRIELKGIDF KEDGNILGHK LEYNYNSHNV YITADKQKNG
201 IKANFKIRHN IEDGSVQLAD HYQQNTPIGD GPVLLPDNHY LSTQSALSKD
251 PNEKRDHMVL LEFVTAAGIT HGMDELYK
HITS AT: 13-28

REFERENCE 1: 131:348793

L1 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 250662-75-0 REGISTRY
CN 5: PN: WO9957992 SEQID: 5 unclaimed protein (9CI) (CA INDEX NAME)
CI MAN
SQL 45

SEQ 1 MTMITPSLKD HLIHNVHKEE HAHAHNKIDD DDKVDGSPGT ELVIS
========== ======
HITS AT: 11-26

REFERENCE 1: 131:348793

L1 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 250266-36-5 REGISTRY
CN L-Methionine, L-seryl-L-leucyl-L-lysyl-L-α-aspartyl-L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L-α-glutamyl-L-α-glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl-L-asparaginyl-L-lysyl-L-isoleucyl-L-seryl-L-valyl-L-valylglycyl-L-valylglycyl-L-alanyl-L-valylglycyl- (9CI) (CA INDEX

NAME)
SQL 32

SEQ 1 SLKDHLIHNV HKEEHAHAHN KISVVGVGAV GM
====== ==========
HITS AT: 5-20

REFERENCE 1: 131:348793

L1 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 133556-98-6 REGISTRY
CN Dehydrogenase, lactate (chicken isoenzyme A reduced) (9CI) (CA INDEX NAME)
CI MAN
SQL 332

SEQ 1 MSLKDHLIHN VHKEEHAHAH NKISVVGVGA VGMACAISIL MKDLADELTL
===== ========== =
51 VDVVEDKLKG EMLDLQHGSL FLKTPKIISG KDYSVTAHSK LVIVTAGARQ
101 QEGESRLNLV QRNVNIFKFI IPNVVKYSPD CKLLIVSNPV DILTYVAWKI
151 SGFPKHRVIG SGCNLDSARF RHLMGERLGI HPLSCHGWIV GEHGDSSVPV
201 WSGVNVAGVS LKALHPDMGT DADKEHWKEV HKQVVDSAYE VIKLKGYTSW
251 AIGLSVADLA ETIMKNLRRV HPISTAVKGM HGIKDDVFLS VPCVLGSSGI
301 TDVVKMILKP DEEEKIKKSA DTLWGIQKEL QF
HITS AT: 6-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 114:200707

L1 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 68939-01-5 REGISTRY
CN Dehydrogenase, lactate (chicken muscle subunit M protein moiety reduced) (9CI) (CA INDEX NAME)
CI MAN
SQL 331

SEQ 1 SLKDHLIHNV HKEEHAHAHN KISVVGVGAV GMACAISILM KDLADELTLV
====== ==========
51 DVVEDKLKGE MMDLQHGSLF LKTPKITSGK DYSVTAHSKL VIVTAGARQQ
101 EGESRLNLVQ RNVNIFKFII PNVVKYSPDC KLLIVSNPVD ILTYVAWKIS
151 GFPKHRVIGS GCNLDSARFR HLMGERLGIH PLSCHGWIVG QHGDSSVPVW
201 SGVNVAGVSL KALHPDMGTD ADKEHWKEVH KQVVDSAYEV IKLKGYTSWA
251 IGLSVADLAE TIMKNLRRVH PISTAVKGMH GIKDDVFLSV PCVLGSSGIT
301 DVVKMILKPD EEEKIKKSAD TLWGIQKQLQ F
HITS AT: 5-20

REFERENCE 1: 90:50551

FILE 'CAPLUS' ENTERED AT 12:16:45 ON 13 FEB 2006

FILE COVERS 1907 - 13 Feb 2006 VOL 144 ISS 8
FILE LAST UPDATED: 12 Feb 2006 (20060212/ED)

L2 12 L1

L2 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 14 Apr 2005
ACCESSION NUMBER: 2005:319749 CAPLUS
DOCUMENT NUMBER: 142:387959
TITLE: Production method of the mutation protein variant in cell-free protein translation system
INVENTOR(S): Umehara, Takashi; Matsumoto, Takehisa; Tanaka, Akiko; Yokoyama, Shigeyuki
PATENT ASSIGNEE(S): The Institute of Physical & Chemical Research Riken, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005095083	A2	20050414	JP 2003-334083	20030925
PRIORITY APPLN. INFO.:			JP 2003-334083	20030925

AB The protein engineering method of producing the mutation protein variant in cell-free protein translation system has been developed. The process includes the first PCR for preparing two dsDNA fragments with insertions of mutation and linker using the template DNA for the protein, primer A (forward primer plus linker) and primer S (reverse primer plus linker) and the second PCR using the two dsDNA fragments, the dsDNA containing transcription initiation site and the dsDNA containing transcription terminal site as the templates and sense- and -antisense primers. The primer A and the primer S reversely direct to the mutation site and have overlap sequences. The linear dsDNA prepared by the PCRs is designed to be used for producing mutation protein variant in cell-free protein translation system. The sets of primer Si and primer Ai+1 ($1 \leq i \leq p-1$, i = integer number) are used to prepare dsDNA fragments (n = P +1) for introducing mutations to different sites (n = P). The PCR mutagenesis based on the claimed method for expressing the variants of budding yeast YJL115W protein was performed and the production of the variant proteins in the E. coli cell-free protein translation system was demonstrated. The claimed method can provide the technique of rapid preparation of variant proteins for X-ray multiple anomalous diffraction crystallog. and for the functional screening of the abnormal proteins encoded by polymorphic

genes.

IT **484053-89-6**
RL: PRP (Properties)
(unclaimed sequence; production method of the mutation protein variant in cell-free protein translation system)

L2 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 14 Apr 2005
ACCESSION NUMBER: 2005:315728 CAPLUS
DOCUMENT NUMBER: 142:387958
TITLE: Preparation of carboxyl terminal-deleted protein variants in soluble form in cell free protein translation system
INVENTOR(S): Umehara, Takashi; Matsumoto, Takehisa; Tanaka, Akiko; Yokoyama, Shigeyuki
PATENT ASSIGNEE(S): The Institute of Physical & Chemical Research Riken, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005095079	A2	20050414	JP 2003-333932	20030925
PRIORITY APPLN. INFO.:			JP 2003-333932	20030925

AB The methods to prepare carboxyl terminal-deleted protein variants in cell free protein translation system have been developed. The method includes the pausing of the transcription process (from the template DNA by RNA polymerase) by adding 3'-dNTP (3'-dATP, 3'-dGTP, 3'-dCTP or 3'-dUTP) to produce the 3'-end truncated RNA encoding carboxyl terminal-deleted protein. The 3'-dNTP/NTP ratio for pausing is set to be 1 .apprx. 10 (more specifically 1 .apprx. 3):100 in the substrate mixture Alternative method includes the pausing of the DNA amplification process (from the template DNA by DNA polymerase) by adding 2',3'-ddNTP (2',3'-ddATP, 2',3'-ddGTP, 2',3'-ddCTP or 2',3'-ddTTP) to produce the 3'-end truncated DNA and cognate RNA transcript encoding carboxyl terminal-deleted protein. The soluble protein variants can be selected among the proteins with C-terminal truncations that have been expressed in the cell free system and therefore the method can be used to identify the motifs involved in protein solubility Preparation of the C-terminal truncated protein in the E.
coli cell free translation system by the claimed method using 2',3'-ddNTP in DNA truncation were demonstrated by using human SIIT1 protein as an example.

IT **484053-89-6**
RL: PRP (Properties)
(unclaimed sequence; preparation of carboxyl terminal-deleted protein variants in soluble form in cell free protein translation system)

L2 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 17 Sep 2004
ACCESSION NUMBER: 2004:759732 CAPLUS
DOCUMENT NUMBER: 141:273989
TITLE: Purification of fusion proteins using immobilized

bi-metal affinity chromatography
INVENTOR(S): Tchaga, Grigoriy S.; Jokhadze, George G.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S. Pat. Appl. 2002 164,718.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004180415	A1	20040916	US 2004-762588		20040121
US 2002164718	A1	20021107	US 2001-858332		20010515
PRIORITY APPLN. INFO.:			US 2001-858332	A2	20010515
			US 2003-441804P	P	20030121
			US 1998-101867P	P	19980925
			US 1999-404017	B2	19990923

AB The present invention relates to IMAC (Immobilized Metal Affinity Chromatog.). The present invention provides methods of purifying proteins that include a metal ion affinity peptide. The methods generally involve contacting a fusion protein that includes a metal ion affinity peptide with at least two different metal ion chelating resins. In certain representative embodiments, the methods include contacting a fusion protein with a first metal ion chelate resin having a first immobilized metal ion; eluting any bound protein from the first metal ion chelate resin, to produce an eluate; contacting the eluate with a second metal ion chelate resin having a second immobilized metal ion; and eluting any bound protein from the second metal ion chelate resin. Also provided are kits for use in practicing the subject methods. An illustrative purification protocol for Bi-MAC (Bi-Metal Affinity Chromatog.) is shown. The subject methods find use in a variety of protein purification applications.

IT **474426-21-6**
RL: PRP (Properties)
(unclaimed sequence; purification of fusion proteins using immobilized bi-metal affinity chromatog.)

L2 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 30 Aug 2004
ACCESSION NUMBER: 2004:706184 CAPLUS
DOCUMENT NUMBER: 141:345966
TITLE: Immobilized cobalt affinity chromatography provides a novel, efficient method for herpes simplex virus type 1 gene vector purification
AUTHOR(S): Jiang, Canping; Wechuck, James B.; Goins, William F.; Krisky, David M.; Wolfe, Darren; Ataai, Mohammad M.; Glorioso, Joseph C.
CORPORATE SOURCE: Department of Chemical Engineering, University of Pittsburgh, Pittsburgh, PA, USA
SOURCE: Journal of Virology (2004), 78(17), 8994-9006
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Herpes simplex virus type 1 (HSV-1) is a promising vector for gene therapy applications, particularly at peripheral nerves, the natural site of virus latency. Many gene vectors require large particle nos. for even early-phase clin. trials, emphasizing the need for high-yield, scalable manufacturing processes that result in virus prepns. that are nearly free of cellular DNA and protein contaminants. HSV-1 is an enveloped virus that requires the development of gentle purification methods. Ideally, such methods should avoid centrifugation and may employ selective purification processes that rely on the recognition of a unique envelope surface chemical Here we describe a novel method that fulfills these criteria. An immobilized metal affinity chromatog. (IMAC) method was developed for the selective purification of vectors engineered to display a high-affinity binding peptide. Feasibility studies involving various transition metal ions (Cu2+, Zn2+, Ni2+, and Co2+) showed that cobalt had the most desirable features, which include a low level of interaction with either the normal virus envelope or contaminating DNA and proteins. The introduction of a cobalt-specific recognition element into the virus envelope may provide a suitable target for cobalt-dependent purification To test this possibility, we engineered a peptide with affinity for immobilized cobalt in frame in the heparan sulfate binding domain of HSV-1 glycoprotein B, which is known to be exposed on the surface of the virion particle and recombined into the viral genome. By optimizing the IMAC loading conditions and reducing cobalt ion leakage, we recovered 78% of the tagged HSV-1 recombinant virus, with a >96% reduction in contaminating proteins and DNA.

IT **259678-66-5D**, fusion proteins with HSV1 gB
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HSV1 vectors containing; immobilized cobalt affinity chromatog. provides novel, efficient method for herpes simplex virus type 1 gene vector purification)

REFERENCE COUNT: 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 14 Jan 2003
ACCESSION NUMBER: 2003:29500 CAPLUS
DOCUMENT NUMBER: 138:84441
TITLE: PCR amplification of template DNA for cell-free protein synthesis system
INVENTOR(S): Motoda, Yoko; Yabuki, Takashi; Kikawa, Takanori; Yokoyama, Shigeyuki
PATENT ASSIGNEE(S): Institute of Physical and Chemical Research, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003009880	A2	20030114	JP 2001-201356	20010702
CA 2452396	AA	20030116	CA 2002-2452396	20020624
WO 2003004703	A1	20030116	WO 2002-JP6261	20020624

W: CA, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,

NL, PT, SE, TR
EP 1411131 A1 20040421 EP 2002-736176 20020624
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR
US 2004214292 A1 20041028 US 2003-748055 20031231
PRIORITY APPLN. INFO.: JP 2001-201356 A 20010702
WO 2002-JP6261 W 20020624

AB A process for producing template DNA for use in cell-free protein synthesis by DNA amplification, is provided. A first double-stranded DNA (dsDNA) coding for a protein, a second dsDNA overlapping at the 5' end, a third dsDNA overlapping at the 3' end, a sense primer hybridizable to the 5' end of the second dsDNA, an antisense primer hybridizable to the 3' end of the 3rd dsDNA, are used for polymerase chain reaction (PCR). Single-stranded DNA can also be used in place of dsDNA. Use of a terminator sequence and peptide tag such as maltose-binding protein, cellulose-binding domain, glutathione-S-transferase, thioredoxin, streptavidin-binding peptide, or histidine-containing peptide, is claimed. Expression of Ras protein in cell-free protein synthesis system using the native histidine tag present in the N-terminal of chicken muscle lactate dehydrogenase, T7 promoter, and T7 terminator, is described. Chloramphenicol acetyltransferase, and 10 arbitrarily chosen clones from mouse full-length cDNA library were also expressed. By using this process, a desired polypeptide can be synthesized within a short period of time at a high yield and at a low cost, compared with the conventional processes.

IT **484053-89-6**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(amino acid sequence; PCR amplification of template DNA for cell-free protein synthesis system)

L2 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 14 Jan 2003
ACCESSION NUMBER: 2003:29497 CAPLUS
DOCUMENT NUMBER: 138:84439
TITLE: PCR amplification of template DNA for cell-free protein synthesis system
INVENTOR(S): Motoda, Yoko; Yabuki, Takashi; Kikawa, Takanori; Yokoyama, Shigeyuki
PATENT ASSIGNEE(S): Institute of Physical and Chemical Research, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003009877	A2	20030114	JP 2001-200676	20010702

PRIORITY APPLN. INFO.: JP 2001-200676 20010702

AB A process for producing template DNA for use in cell-free protein synthesis by DNA amplification, is provided. A first double-stranded DNA (dsDNA) coding for a protein, a second dsDNA overlapping at the 5' end, a third dsDNA overlapping at the 3' end, a sense primer

hybridizable to the 5' end of the second dsDNA; an antisense primer hybridizable to the 3' end of the 3rd dsDNA, are used for polymerase chain reaction (PCR). Single-stranded DNA can also be used in place of dsDNA. Use of a terminator sequence and peptide tag such as maltose-binding protein, cellulose-binding domain, glutathione-S-transferase, thioredoxin, streptavidin-binding peptide, or histidine-containing peptide, is claimed. Expression of Ras protein in cell-free protein synthesis system using the native histidine tag present in the N-terminal of chicken muscle lactate dehydrogenase, T7 promoter, and T7 terminator, is described. Chloramphenicol acetyltransferase, and 10 arbitrarily chosen clones from mouse full-length cDNA library were also expressed. By using this process, a desired polypeptide can be synthesized within a short period of time at a high yield and at a low cost, compared with the conventional processes.

IT **484053-89-6**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(amino acid sequence; PCR amplification of template DNA for cell-free protein synthesis system)

L2 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 05 Jan 2003
ACCESSION NUMBER: 2003:5975 CAPLUS
DOCUMENT NUMBER: 138:69467
TITLE: Water-soluble polymeric metal ion affinity compositions, method for their preparation and use in homogeneous and heterogeneous determination and purification
INVENTOR(S): Tchaga, Grigoriy S.
PATENT ASSIGNEE(S): Clontech Laboratories, Inc., USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000708	A1	20030103	WO 2002-US19879	20020620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN; GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2447594	AA	20030103	CA 2002-2447594	20020620
US 2003023037	A1	20030130	US 2002-176955	20020620
US 6703498	B2	20040309		
EP 1397372	A1	20040317	EP 2002-742266	20020620
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005517152	T2	20050609	JP 2003-507111	20020620

PRIORITY APPLN. INFO.: US 2001-300336P P 20010621

WO 2002-US19879 W 20020620

AB Water-soluble metal ion affinity compds. and methods for using the same are provided. The subject compds. include an aspartate based metal chelating ligand bonded to a water-soluble polymeric substrate, where the ligand is complexed with a metal ion. In certain embodiments, the subject compds. further include a member of a signal producing system, e.g., a directly or an indirectly detectable label moiety. Also provided are water-insol. supports having the subject compds. present on, e.g., immobilized on, at least one surface thereof. The subject compds. find use in a variety of different applications, including analyte detection and analyte purification applications.

IT **474426-21-6**
RL: PRP (Properties)
(unclaimed sequence; water-soluble polymeric metal ion affinity compns., method for their preparation and use in homogeneous and heterogeneous determination and purification)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 08 Nov 2002
ACCESSION NUMBER: 2002:850241 CAPLUS
DOCUMENT NUMBER: 137:365958
TITLE: Metal ion affinity peptides and methods for using the same in protein purification methods
INVENTOR(S): Tchaga, Grigoriy S.; Jokhadze, George G.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 23 pp., Cont.-in-part of U. S. Ser. No. 404,017, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2002164718	A1	20021107	US 2001-858332		20010515
US 2004180415	A1	20040916	US 2004-762588		20040121
PRIORITY APPLN. INFO.:			US 1998-101867P	P	19980925
			US 1999-404017	B2	19990923
			US 2001-858332	A2	20010515
			US 2003-441804P	P	20030121

OTHER SOURCE(S): MARPAT 137:365958
AB The present invention provides metal ion affinity peptides, fusion proteins comprising metal ion affinity peptides, and polynucleotides encoding the fusion proteins. The invention further provides recombinant vectors comprising subject polynucleotides, and host cells comprising the recombinant vectors. The invention further provides methods and kits for purifying a fusion protein comprising a metal ion affinity peptide.

IT **474426-21-6**
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(amino acid sequence; metal ion affinity peptides and methods for using the same in protein purification methods)
IT **475131-37-4**
RL: PRP (Properties)
(unclaimed sequence; metal ion affinity peptides and methods for using the same in protein purification methods)

L2 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 09 Dec 1999
ACCESSION NUMBER: 1999:779602 CAPLUS
DOCUMENT NUMBER: 132:177550
TITLE: Natural poly-histidine affinity tag for purification of recombinant proteins on cobalt(II)-carboxymethylaspartate crosslinked agarose
AUTHOR(S): Chaga, G.; Bochkariov, D. E.; Jokhadze, G. G.; Hopp, J.; Nelson, P.
CORPORATE SOURCE: Clontech Laboratories, Inc., Palo Alto, CA, USA
SOURCE: Journal of Chromatography, A (1999), 864(2), 247-256
CODEN: JCRAEY; ISSN: 0021-9673
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A natural 19-amino-acid poly-histidine affinity tag was cloned at the N-terminus of three recombinant proteins. The vectors containing the DNA of the fusion proteins were used for transformation of Escherichia coli DH5α cells. Each protein was expressed, extracted and purified in one chromatog. step. The purification procedure for each protein can be accomplished in less than 1 h. A new type of immobilized metal ion affinity chromatog. adsorbent - Co2+-carboxymethylaspartate agarose Superflow - was utilized at linear flow-rates as high as 5 cm/min. The final preparation of each protein is with purity greater than 95% as ascertained by SDS-electrophoresis. Recovery for each purified protein was higher than 77% of the initial loaded amount as judged by biol. activity. The operational capacity of Co2+-carboxymethylaspartate agarose for each protein was determined
IT **259678-66-5P**
RL: BPN (Biosynthetic preparation); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(polyhistidine affinity tag (HAT); natural poly-histidine affinity tag for purification of recombinant proteins on cobalt(II)-carboxymethylaspartate crosslinked agarose)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 19 Nov 1999
ACCESSION NUMBER: 1999:736412 CAPLUS
DOCUMENT NUMBER: 131:348793
TITLE: Compositions and methods for protein purification based on a metal ion affinity site
INVENTOR(S): Tchaga, Grigoriy; Jokhadze, George G.
PATENT ASSIGNEE(S): Clontech Laboratories, Inc., USA
SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9957992	A1	19991118	WO 1999-US10662		19990514
W: AU, CA, JP					
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
AU 9941877	A1	19991129	AU 1999-41877		19990514
PRIORITY APPLN. INFO.:			US 1998-78687	A	19980514
			WO 1999-US10662	W	19990514

AB The present invention describes introducing metal ion affinity sequences into recombinant proteins to allow for purification and/or immobilization of these proteins. The present invention provides a fusion protein, comprising: a protein of interest fused at its amino-terminus or carboxy-terminus to at least one affinity peptide, said fusion protein having a formula R1-(HXn)m-R2, wherein R1 or R2 is said protein of interest, n = 1-8, m = 2-30, and wherein if n = 1 for more than two adjacent units of HX, at least one X must be asparagine, phenylalanine, tryptophan, tyrosine, lysine, methionine, arginine, glutamine, or cysteine.

IT **250266-36-5P**
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); RCT (Reactant); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(compns. and methods for protein purification based on a metal ion affinity site)

IT **250662-75-0 250676-82-5**
RL: PRP (Properties)
(unclaimed protein sequence; compns. and methods for protein purification based on a metal ion affinity site)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 31 May 1991
ACCESSION NUMBER: 1991:200707 CAPLUS
DOCUMENT NUMBER: 114:200707
TITLE: Nucleotide and deduced amino acid sequences of chicken lactate dehydrogenase-A
AUTHOR(S): Hirota, Y.; Katsumata, A.; Takeya, T.
CORPORATE SOURCE: Inst. Chem. Res., Kyoto Univ., Uji, Japan
SOURCE: Nucleic Acids Research (1990), 18(21), 6432
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A cDNA clone carrying the lactate dehydrogenase A chain (LDH-A) from a chicken embryo fibroblasts cDNA library was isolated by differential hybridization and sequenced the expression of the LDH-A was increased 8-fold in CEF transformed by Rous sarcoma virus. The cDNA clone is 1575 bp long; it consists of a 59 bp 5' noncoding region, a 996-bp

coding region, and a 520 bp 3'-noncoding region, a 996-bp coding region, and a 520-bp 3' noncoding region. The deduced amino acid sequence is identical to the sequence determined by amino acid sequencing except at 2 residues; Leu-63 and Ile-78 instead of Met-63 and Thr-78, resp. To investigate the origins of these changes, the nucleotide sequences of the corresponding regions on the genomic clones were analyzed and the genomic sequences of amino acid position 63 and 78 were ACG (Thr) and ACA (Thr), resp. It thus seems likely that misincorporations occurred at both positions during the cloning process and that the still remaining difference at position 63 (Leu-63 and Thr-63) might be due to other reasons, such as the difference of strain used.

IT **133556-98-6**
RL: PRP (Properties)
(amino acid sequence of)

L2 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1979:50551 CAPLUS
DOCUMENT NUMBER: 90:50551
TITLE: The primary structures of chicken lactate dehydrogenase M4 and H4 isoenzymes
AUTHOR(S): Torff, Hans Joachim; Becker, Dagobert; Schwarzwaelder, Johanna
CORPORATE SOURCE: Inst. Biophys. Phys. Biochem., Univ. Regensburg, Regensburg, Fed. Rep. Ger.
SOURCE: FEBS-Symposium (1977), 49(Pyridine Nucleotide - Dependent Dehydrogenases), 31-42
CODEN: FEBSDB; ISSN: 0071-4402
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The amino acid sequences of chicken lactate dehydrogenase isoenzymes M4 and H4 are presented and compared with those of the pig isoenzymes. Comparison of chicken M and H chain sequences with each other shows that 252 (76%) of the residues occur in identical sequence. Nonidentical residues are not spread statistically over the sequence but are accumulated at the N- and C-termini. Sequences representing active site domains show only 1 or 2 substitutions in sequences up to 20 and more amino acids. A comparison of the pig and chicken sequences shows that 66% of the positions are identical. However, if only the H4 isoenzymes of pig and chicken are compared, .apprx.90% of the sequence are identical and the C-terminal 34 amino acid residues show only 2 substitutions. The longest sequence of identical residues in both types of enzymes includes the loop region which undergoes a conformational change upon substrate binding.

IT **68939-01-5**
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of)

FILE 'MEDLINE' ENTERED AT 12:16:55 ON 13 FEB 2006

FILE 'BIOSIS' ENTERED AT 12:16:55 ON 13 FEB 2006

FILE 'EMBASE' ENTERED AT 12:16:55 ON 13 FEB 2006

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FILE 'HOME' ENTERED AT 12:17:03 ON 13 FEB 2006
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     FILE 'REGISTRY' ENTERED AT 12:16:00 ON 13 FEB 2006
L1             10 SEA ABB=ON  PLU=ON  HLIHNVHKEEHAHAHN/SQSP

     FILE 'REGISTRY' ENTERED AT 12:16:41 ON 13 FEB 2006
               D L1 1-10 .BEVREG1

     FILE 'CAPLUS' ENTERED AT 12:16:45 ON 13 FEB 2006
L2             12 SEA ABB=ON  PLU=ON  L1
               D 1-12 .BEVSTR

     FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 12:16:55 ON 13 FEB 2006
L3              0 SEA ABB=ON  PLU=ON  L1

     FILE 'HOME' ENTERED AT 12:17:03 ON 13 FEB 2006


     FILE REGISTRY
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     DICTIONARY FILE UPDATES:  12 FEB 2006  HIGHEST RN 874108-28-8

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FILE LAST UPDATED: 12 Feb 2006 (20060212/ED)

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FILE MEDLINE
FILE LAST UPDATED: 11 FEB 2006 (20060211/UP). FILE COVERS 1950 TO DA

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http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.ht
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

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RECORDS LAST ADDED: 8 February 2006 (20060208/ED)

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FILE COVERS 1974 TO 9 Feb 2006 (20060209/ED)

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